

## Urban Futures The Challenge of Sustainability

AGS Annual Meeting 2009  
at the ETH Zurich



The AGS Annual Meeting is a place for stimulating discussions, exchanging ideas, and establishing collaborations



Poster session

The AGS Annual Meeting 2009 held at the ETH in Zurich, Switzerland, in January, focused on the challenges posed by the dramatic growth in urban populations worldwide. Although this growth presents many acute problems, it is also a unique opportunity to move towards a more sustainable use of natural resources. As the former director-general of UNEP, Klaus Toepfer, once remarked, *'The battle for sustainable development will be won or lost in the cities'*. With this idea in mind, two propositions guided the planning of the conference:

- ★ that cities, properly managed, can be transformative arenas in which natural resources are used more efficiently, contributing to a high quality of life for everyone, and

- ★ that reinventing cities offers one of the most effective ways to reduce human impacts upon the environment and achieve greater sustainability.

The 360 participants from 32 countries explored the dimensions of the challenge in keynote talks, panel discussions, workshops and poster sessions. Topics included energy governance, urban ecology, architecture for the open city, size, shape and sustainability of cities, options for pro-poor urban development, transforming the building stock for sustainability, and whether more mobility increases happiness. The poster session with 126 posters highlighted a wide range of innovative solutions to questions of energy, mobility, water and urban agriculture, policy and governance, sustainable construction, education for sustainable development, and urban sustainability indicators.

Lars Reutersward, Director of the Global Division of UN-Habitat, graphically illustrated the consequences of the ongoing dramatic increase in slum populations worldwide, and pointed out that this does not have to continue – solutions are available. This point was demonstrated by the ETH North-South Centre panel speakers who are working in developing countries. But we cannot simply do more of the same urban development, and UN-Habitat needs universities to provide critical analysis and effective models for more sustainable urban planning. Several speakers urged that urban designers need to rethink land use, and try to create compact, efficient cities. Kees Christiaanse, ETH architect, acknowledged that architects cannot design social cohesion. But they can design breeding grounds for social sustainability, an idea which is fundamental to the concept of the 'open city'. Flexible designs and plans allow neighbourhoods to develop in an inclusive way, rather than building inequity into the city structure.

Speakers from the AGS partner universities showed how research programs at each university are tackling the challenge, including research for sustainable urban futures, and

pathways to sustainable energy systems. The energy panelists were united in their message. Globally, most energy is consumed in cities. If we are to reach a low carbon society for all in time to avoid the worst effects of climate change, we need an urgent and massive transformation not only in our urban infrastructure and technology, but also significant economic and social changes in our use of energy. AGS speakers emphasised that the urban futures challenge must be tackled with an integrated, interdisciplinary research approach. This requires not only engineers, designers, and natural scientists, but social scientists, political experts, and external partners, to find a common understanding of shared problems, and jointly agree and collaborate on new ways to find solutions. Solutions will only be identified and implemented if researchers work closely together with external partners. Interactive tools and spaces enable participatory interactions and synergies with researchers, planners, local populations, government decision makers, and industry leaders.

The AGS was called upon to initiate new activities aimed at developing pathways towards low carbon societies that bring in developing and emerging countries, particularly China and India. The Alliance could provide a more holistic approach to energy by improving design and planning methods and indicators, structuring energy information, exchanging models, and developing systemic approaches.

The conference offered a forum for perspectives from public and private stakeholders as well as academia, ranging from UN perspectives on challenges and opportunities for academia, to visions from a leading company implementing sustainable city development projects worldwide, to the initiator of an NGO creating self-help communities using innovative bottom-up construction methods. The conference was greatly enriched by the participation of students from all over the world, and by the participation of researchers from developing countries, including 10 sponsored by the ETH from a competitive selection process.

The Annual Meeting was held in conjunction with the Student Summit for Sustainability, who greatly enriched the program and the conference with provocative speakers and the presence of 86 students from all over the world.

POSTERS AND WEBCASTS

The talks, posters, and report of the Annual Meeting 2009 are all available as webcasts and pdf downloads at [www.agsam2009.ethz.ch](http://www.agsam2009.ethz.ch)

COMMENTS FROM PARTICIPANTS

*"It was a very stimulating and enriching experience. The perspective of inclusive planning of cities and how to achieve the sustainable city concept is very pertinent to my country (India). The message I took home: recognise the role of research institutions in shaping the future of cities!"*

Sponsored participant  
from Indian NGO

*"Many presenters pointed to the need of linking urban material cycles, especially nutrient cycles, to the rural cycles (especially agriculture). This questions the adequacy of northern countries' sanitation and waste water treatment infrastructure and offers new possibilities for developing smarter systems in regions of the world where these investments and choices are still to be made. The presentation by Roland Schertenleib showing the advantages of decentralized systems based on greater levels of recycling was very enlightening. The question remains of what we can do in northern countries to improve this situation."*

Student participant  
from ETH

*"The conference theme was very challenging and it was just wonderful to listen to all the eminent speakers. I particularly enjoyed Prof. Bish Sanyal's elaborative and yet realistic perspective on size, shape and sustainability of cities."*

Sponsored participant  
from Tanzanian  
environmental consultancy

*"Kees Christiaanse's "Open City" talk impressed me most. He was one of the very few who did not focus on isolated questions concerning energy demand, but brought in a broader perspective of a future city. After two decades of focusing on technological solutions (e.g. energy saving and efficiency efforts) but still facing an increasing demand of energy and mobility it is time to broaden the focus and look on the human beings and their needs and wishes."*

Swiss student  
participant

ENERGY PANEL EXPERTS



Filip Johnsson from Chalmers  
University of Technology



Ernest J. Moniz from  
the MIT Energy Initiative



Keisake Hanaki from  
The University of Tokyo



Konstantinos Bolouchos from the  
ETH Energy Science Center



Daniel Favnat from EFFL

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